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Farming in the Atomic Age

Brazil's Declining Cotton Exports

Cattle Across the Border

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FOREIGN AGRICULTURE

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To report and interpret world agricultural developments.

Abundance In the Atomic Age

A Canadian friend, in our lead article, offers some timely comments on the challenges that lie ahead as modern agriculture continues to produce more, on fewer acres and with less manpower.

Although the article does not stress the point, the writer undoubtedly would agree that one of the big challenges is the question of what to do with the expanded output.

The United States, like Canada and other advanced nations, is feeling the impact of technology on its agriculture. The crop harvested in the United States in 1957 equaled the previous all-time high record, yet was grown on the smallest acreage since 1919. U.S. farmers are getting more out of each acre for nearly all crops. Increases have been most marked for major field crops such as wheat, corn, cotton, and tobacco.

With agricultural production up, and still more advancements around the corner, exports have come to play an essential role in marketing the expanded output of modern agriculture.

As aptly stated by the Administrator of the Foreign Agricultural Service, "Were it not for exports, American agriculture would drown in its own production."

Cover Photograph

Uganda's cotton starts on a long trek, from the local buying station to the gins and eventually into export channels. Uganda grows more cotton than any other British colonial territory and exports most of it.

In This Issue

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Farming in the Atomic Age

By F. J. GREANEY *

IN THE LAST 25 years, production per acre and productivity per man have risen rapidly, not only in Canada but in every other major agricultural country in the world. The rate at which technical changes are taking place today is much faster than it was before the last war. Over the next 25 or 30 years—the early atomic age—will this pace level off or will it speed up? And what will be the impact of agricultural technology on the farmer and his family, on production, education, and trade?

Any attempt to answer these questions must obviously be speculative. But they are so vital to so many aspects of the farming industry—and to the solution of world agricultural problems—that it seems worthwhile to hazard some forecasts.

Take a look at the forces that are generating the momentum to be seen in today's agricultural industry. Many of the changes now occurring have been stimulated by the world-wide need for more foodstuffs, and by the progressive agricultural policies of our governments—policies which have led to greater and greater farm production.

But the main creators of change have been the scientists and engineers, helped, of course, by the many organizations and industries associated with agriculture, which have done their best to keep up with technical progress. The rise in overall production has been largely caused by technological developments of a wide range: New machinery, new and more effective chemicals for destroying plant and animal pests and diseases, artificial insemination, higher fertilizer application, new and better strains of grains, grasses, and other farm crops.

A point to be emphasized, however, is that all of this technical progress has made agricultural problems more complex. Efficiency, which we hear so much about these days, calls for greater management ability than it did a generation ago. Mechanization of farm work, the growing use of specialized equipment, and our higher production levels have all combined to raise the capital investment needs of agriculture.

Scientific Trends

These trends toward greater efficiency are likely to continue at an even greater pace. In the decades that lie ahead we can expect enormous developments in practically all phases of the agricultural industry. And these developments will stem from two sources—the biological sciences and the new physical sciences, including atomic physics and electronics.

The biological sciences — among them agricultural chemistry—will give us more precise control in both crops and animal husbandry. But they will call for new and more complex equipment.

The impact of the applied physical sciences will be reflected also in better control of plant and animal life. Even today, atomic radiation is benefiting agriculture. It makes stored fruits and vegetables keep longer. It has made more breeding material available for new crop varieties. And it permits a more thorough study of fertilizer use in plants, since the fertilizer elements can now be traced with a Geiger counter.

Furthermore, new developments in the physical sciences will result in more mechanization, more automation. This greater mechanization would give fresh impetus to the continual drift of manpower from the land to non-farming employment. Those who stay on the farm will need to be highly trained and skilled in order to make the best use of the increasingly complex and expensive machinery. The *individual man* will tend to replace *men* on the farm.

Things To Come

To illustrate some of the specific, though necessarily speculative, examples of what we may expect from the newer applied sciences, here are a few typical examples of things to come:

First, the greater use of nuclear energy as a means to cheaper electricity on the farm and in the farm home. By 1980 we may be using selective wave lengths of the electro-magnetic spectrum for the preservation of meats, vegetables, and other food products, for the control of sex in livestock, and for other purposes. In brief, the physical scientists will no doubt give us devices of one sort or another which will increase the precision and range of all our farming operations.

Second, electronic control of farm operations. The prototype of radio-controlled tractors has already been tested. By 1980 one may be able, by means of a closed-circuit television, to look after four electronically controlled tractors working at four different jobs —such as plowing, cultivation, seeding, fertilizer application—in four different fields. By then tractors will have long ceased to be implement pullers, and most of our two-man jobs will have become one-man jobs.

Or take the milking of cows. Even today it would seem theoretically possible to devise an electronically controlled series of devices to (1) guide the cow into the milking stall as the previous cow is automatically released, (2) wash the udders and dry them with hot air, (3) identify the cow

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* Dr. Greaney is Director, Line Elevators Farm Service, Winnipeg; and formerly President of the Agricultural Institute of Canada. For much of the technical and other information in this article the author is greatly indebted to Prof. A.N. Duckman, Department of Agriculture, Reading University, England.

Cheviot ewes and lambs graze on Ireland's rolling green pastures.

Ireland's Farm Policy* Retains Price Supports

IRELAND'S CHANGE of government last March has brought some changes in Irish farm policy. But agriculture remains strongly protected. Almost all important farm products still benefit from price supports, either at home or in Britain. Through these supports and other aids, the government aims at expanding agricultural output, increasing exports, and decreasing imports.

Agriculture in general and livestock in particular form the mainstay of the Irish economy. Livestock production, based largely on grass, accounts for three-fourths of the value of farm output. More than 40 percent of the output of the livestock industry is exported, chiefly in the form of feeder cattle. Exports of livestock and livecattle. Livestock and livestock product exports bring in most of Ireland's foreign exchange, accounting for some two-thirds of all exports in 1956.

Most exports go to the United Kingdom. There, by and large, they have unrestricted entry and get the preferential tariff treatment Britain grants to Commonwealth products.

Britain also supports the price of Irish cattle and sheep. If fed in the United Kingdom for 3 months, these animals qualify for government deficiency payments, at a reduced rate, under the British fatstock guarantee system. Deficiency payments are made when the average realized market price for fatstock falls short of the guaranteed price, as has been the case for some time. These payments go to the feeder, but put a floor under prices fetched by feeder stock, and thereby support Irish market prices for all cattle and sheep.

British price guarantees do not now extend to Irish products other than cattle and sheep. But the Irish Government guarantees minimum prices for exports of top-grade bacon to the United Kingdom. This enables curers to pay producers a guaranteed minimum price for Grade A hogs. When losses occur on exports under the guarantee, they are recovered from a fund created partly with the proceeds from a levy on bacon hogs and partly with government funds. These losses became heavy in the latter part of 1957, with the drop in British bacon prices.

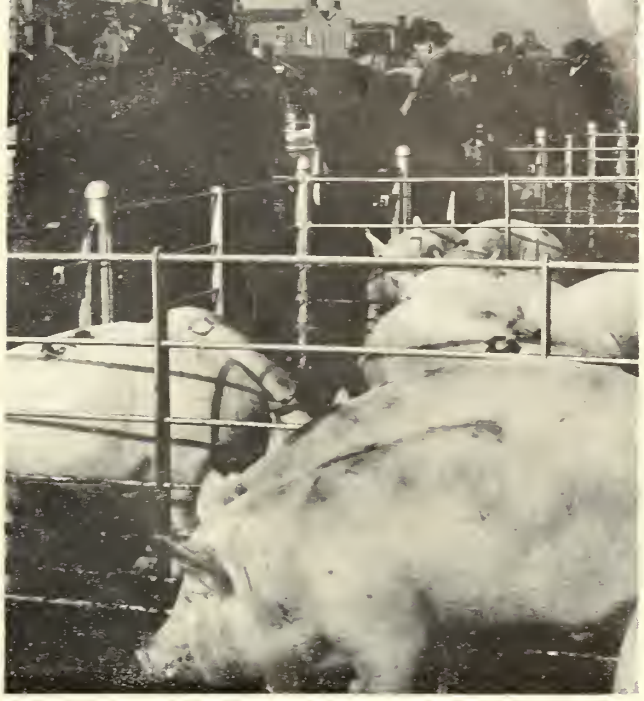
The Irish Government also subsidizes butter exports as part of its farm price support program for milk. This program was modified in May 1957 to eliminate consumer subsidies on butter. At present, the Butter Marketing Committee, a government agency, stands ready to buy butter from creameries at a fixed ex-creamery price of 54.8 cents per pound (dollar equivalent). Part of its purchases is used to supply the Dublin and Bray areas, which include one-fifth of Ireland's population. The surplus is either stored or exported. Cold storage costs are met out of the proceeds of a levy on butter sales to the Committee. Losses on exports are met by the government, which reserves to the Committee the right to export and import butter.

Accumulation of stocks led to substantial exports of butter in 1957. It has been stated in the Dail that the estimated cost of subsidizing butter exports in the 6 months ending September was nearly $4.4 million (dollar equivalent).

Besides supporting butter prices, the government intervenes in the Dublin and Cork fluid milk markets. The Minister for Agriculture fixes mini-

* Prepared in the European Analysis Branch, Foreign Agricultural Service.

Reclaiming a derelict field. Under government program farmers are putting old land into production.



Large white pigs in Dublin market, soon to be turned into bacon for British breakfast tables.

mum prices for fluid milk delivered by producers, and the Minister for Commerce and Industry maximum retail prices. Supplies are regulated by the Dublin and Cork District Milk Boards.

The government does not assist exports of canned or dried milk, chocolate crumb, or cheese. However, it does restrict imports of milk and milk products, except cheeses of a type not produced in Ireland.

Among crops, the only important one produced for export is seed potatoes. Exports are monopoly-controlled, but the Irish Potato Marketing Company gets no government subsidy.

Import and Market Regulation

The Minister for Agriculture has, and uses, the power to control imports of most farm products that compete with Irish agriculture. Such imports consist largely of wheat, feed grains, oilcake, seeds for sowing, sugar, fruit, and wool. The United States supplied nearly one-fifth of total competing imports in 1956. Among imports of products not grown in Ireland, over nine-tenths of the tobacco came from the United States, and nearly two-fifths of the cotton.

Imports of most competing products are controlled as a means of reserving part or all of the market for home producers and maintaining fixed or negotiated prices. Thus, wheat growers have a guaranteed market at fixed prices for all millable wheat they produce. The guarantee is met by requiring millers to use a fixed propor-

Irish cattle ready to ship to feeders in the United Kingdom.

Dublin livestock market. Stock is Ireland's big money earner.

tion of home-produced wheat in the grist. Imports are made by Grain Importers, Ltd., a government-sponsored agency, which has a monopoly of the import trade in wheat, feed barley, corn, and sorghums. A consumer subsidy on flour, in effect since 1941, has cost the government the equivalent of about $17 million annually in recent years. This subsidy was abolished May 13, 1957, and the price of bread was increased by nearly 50 percent to about 15 cents per 2-pound loaf. In August bread prices were decontrolled.

Feed barley growers are also guaranteed a market at minimum prices. Grain Importers regulates feed grain imports so as to facilitate disposal of the domestic barley crop. Malting barley is mostly grown under contract with Guinness & Co. (Dublin) Ltd., at negotiated prices. It almost never has to be imported.

Sugar production and trade are monopolized by the Irish Sugar Company, a government-sponsored agency. The Company contracts with growers for beets at prices fixed after negotiation with the growers' organization and in advance of sowing. The Minister for Commerce and Industry fixes wholesale and retail sugar prices.

Growers of fruit, vegetables, and seeds are protected mainly through import controls. Jam manufacturers must agree to buy available home-grown fruit at negotiated prices before they can get licenses to import pulp of fruit domestically produced in quantity. Certain seeds are also disposed of at negotiated prices.

Other Aids

These price supports protect the Irish farmer. But the government is also encouraging better farming practices. Means of production have been cheapened through rebating part of the duty on fuels used in agricultural machines. A transportation subsidy is granted on ground limestone, paid out of special ECA grant counterpart funds, which lasted through 1957. And, recently, a subsidy was granted to manufacturers of superphosphate to equalize the price they charge farmers and the delivered price of equivalent imported fertilizer.

There are also a number of special

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Foreign Agricultural Policies And Their Effect on Trade

EVERY MAJOR NATION of the world regulates its agriculture in some way. And in most nations, farm policy and foreign trade policy have a close connection. To predict the future of any nation's trade in farm products requires an understanding of its attitude toward its own agriculture.

Policy goals.—The farm policies of foreign governments look toward a variety of goals. Industrialized countries like those in Western Europe aim mainly at protecting agriculture and raising the relatively low income of the farm population. They also want to maintain food production for the sake of national security. But for most of them, further expansion of farm output is only a secondary goal.

On the other hand, the less developed countries of the Free World lay greatest stress on increasing farm production. Most of them grow primary products. They want to improve their people's diet, provide raw materials for their growing industries, and boost their farm exports in order to pay for the capital goods they need in economic development. In the large-scale economic development programs under way in most of these countries, agriculture has a prominent place.

The Communist countries have generally looked on agriculture as a resource to be exploited for the needs of the state. In their drive toward industrialization they have severely regimented their farmers and hampered agricultural development. Recently, some of these countries have modified their farm policy to put more emphasis on economic incentives.

Regulation of foreign trade.—In supporting farm prices and income, most Free World countries rely heavily on various forms of trade regulation. Almost all have long had tariffs and import fees. But quantitative import controls—a newer device—have greater restrictive effect. These can be import quotas, or outright embargoes, or foreign exchange regulations. Another important device is state trading —or in Communist countries, a government monopoly on foreign trade. Still another is bilateral trade and payments agreements, which tend to limit trade opportunities for countries outside. These included clearing unions and preferential tariffs or quotas.

Many countries also use trade regulations to encourage exports. Of major, though decreasing, importance are export subsidies both direct and indirect, including multiple exchange rates and preferential freight rates.

Underdeveloped countries make considerable use of export taxes. Mostly imposed for revenue purposes, these taxes are often varied to influence both the domestic and the export price of the taxed product.

Internal market regulation.—The control of internal markets and prices has gone hand in hand with foreign trade control as an instrument of agricultural policy.

Most widespread are support prices —at farm, wholesale, or retail level, or at all stages of distribution. Maintaining such prices usually involves not only foreign trade controls but purchase and storage operations at home, and sometimes surplus disposal.

Market controls may also be applied to even out or to channel the flow of supplies, or to control the trade completely. Some operate through state monopolies; others, through marketing agencies or boards.

Indirect aids.—Of the various indirect ways governments use to aid agriculture, one of the most important is assistance to education, research, and extension work. Most countries have increased this type of aid. It offers tremendous possibilities for lifting low-efficiency farms to a higher production level—a front-ranking goal in any farm policy.

(Summarized from *Agricultural Policies of Foreign Governments—Including Trade Policies Affecting Agriculture,* issued by FAS in December 1957 as Agriculture Handbook No. 132. For sale by the Superintendent of Documents, Government Printing Office, Washington 25, D.C. Price 70 cents.)

Is Brazil Abandoning The Cotton Export Business?

FOR THE 10 years during and after the war, Brazil was the world's third biggest exporter of cotton. Yet in 1956-57 it was sixth, and shipments were less than half the size of the previous year's? How has this striking change come about?

The answer seems to be that in the running battle between cotton and alternative crops for labor, capital, and farmland, cotton is losing out. The net profits it brings are now so low and uncertain that Brazil's farmers are losing interest in growing it. Cotton acreage and production have been on the down grade in Brazil for several years, and the 1957-58 crop year may see a further decline.

Alternate Crops

Chief among the alternative crops that compete with cotton is coffee. Both are important export crops, but coffee is Brazil's biggest earner of dollars. Thus it has attracted capital—both public and private—away from cotton. It has also attracted labor, for it has been bringing better prices than cotton, and coffee planters have been able to offer better wages. This competition for farm labor is especially keen at harvest, which comes at the same time for both crops.

When prices are satisfactory, and when weather is normal, coffee takes precedence over cotton for Brazil's farmers. But when coffee prices drop, with no improvement in sight, or when many coffee trees are destroyed by an abnormally heavy freeze, farmers often plant cotton on their less desirable coffee land rather than make new coffee plantings that will not bring them immediate returns. In such bad times for coffee, cotton—functioning as a backstop for the farmer—has often shown a temporary production increase. It could do so again.

São Paulo Is Example

Nowhere is the long-term downward trend in Brazil's cotton production more evident than in São Paulo, the South Brazilian State that grows by far the largest share of the country's export cotton and about half of its total cotton crop.

São Paulo has grown cotton for many years, though before 1930 the cotton area was small. In that year, less than 40,000 acres were harvested, with a yield of about 190 pounds of lint per acre. The State reached its production peak in 1943-44, with a crop of 2.7 million bales. At that time, many persons believed that South Brazil might become the world's most important cotton producing area.

Later in the war period, however, São Paulo's cotton production went down, owing to lack of markets. Though it made some comeback later, it never reached its former heights.

Most of São Paulo's cotton farmers appear to feel that they have not shared in the general prosperity of the most populous and wealthy State in Brazil. Cotton area in the State has declined fairly steadily, from 3.7 million harvested acres in the peak year 1943-44 to 1.2 million in 1957. This year, though the government has fixed a support price somewhat higher than last year's—at first, 165 cruzeiros per arroba of 15 kilograms (about 33 lb.), and later, 170 cruzeiros—many farmers are forsaking cotton for other crops. Planted area for the 1958 harvest beginning in March is expected to be slightly less than 900,000 acres.

Labor Problem

Labor scarcity poses one of the São Paulo cotton farmer's worst problems. Not only does the coffee industry draw off farm labor, but industrialization in São Paulo and other cities in the State has attracted many workers away from the farm on a permanent basis. It has also increased the demand for more expensive foods; farm labor in the areas near the towns has been absorbed largely by these higher income crops.

Photos by Winfield King

Right, São Paulo cotton moving to gins; **below,** farmer cultivating his cotton with typical equipment.

Cotton farming has been pushed off to more remote sections of the State.

For about 85 percent of the cotton grown in São Paulo, family labor must carry the load. Most of the farms vary from 10 to 15 acres, and the adults per family from 2 to 3. A family of this size can handle about 15 acres of cotton, doing practically all the work of cultivation, hoeing, and harvesting.

Capital Problems

Capital is as hard to get as labor. High risks tend to drive Brazilian investors away from the cotton business. Among these risks is the strong likelihood of insect infestation by pests including cotton root borers, pink boll worms, locusts, aphids, flea hoppers, and red spiders. Weather, however, presents the greatest hazard. Brazil's weather is often exactly the opposite of what cotton needs. Planting, which should begin with the rainy season, can run into a month or more of drought; and the harvesting period, which comes in the dry season, has had as much rain in each of the past 2 years as usually falls in the whole rainy season. Under these conditions, few cotton growers will bother with improving their land through erosion control or through investing heavily in farm equipment, fertilizer, and insecticides. The typical cotton producer is a tenant or "colono," with no permanent stake in the land and no incentive for taking financial risks.

Suitable Land

Suitable land is another serious lack. Cotton farming in São Paulo has been frontier farming. Originating near Campinas and spreading north and west, it used the fertile soil of the subtropical hardwood forests until erosion and diminishing fertility brought declining yields. Then the cotton farmer moved on to new land. But now there is not much land to move to. Only the interior of the country still has undeveloped areas, and these are inaccessible from lack of roads and railroads. It would take large-scale government action to open up these lands for agricultural use. Though such action is bound to come sooner or later, cotton will still be competing with other crops for the new lands, and any increase in acreage may come slowly.

Yields Decline

This shortage of accessible land means a steady decline in yields. In the newest zones, the farmer plants hastily on land that is only partly cleared. After the trees are cut, the fields remain choked with stumps, trunks, and large branches of dead trees, which are left to decay slowly. Among these fallen trees, the farmer can use neither animals nor machines. He plants with a hand planter, and uses hand tools also for cultivation and weed control. At this stage, the soil is high in humus and little preparation of the land is necessary. Later, as clearing progresses—mostly through deterioration of the fallen wood—the farmer can use a couple of mules for plowing and cultivating. But by the time the fields are clear enough so that some mechanization becomes practicable, the soil has been worn out by growing too many cotton crops with too little fertilizer or green manure.

Production Practices

The tenant farmer who raises much of São Paulo's cotton has not had much incentive to improve his production practices. If the land he rents is undeveloped, he may contract to clear and burn the brush before planting the crop. He must build a shelter, often of grass and mud; provide whatever facilities his family requires; and at the end of the rental period—usually 3 to 5 years—return the land to the owner planted to pasture grass or in the condition stated in the agreement. Only about one farmer in four uses fertilizers. Though most have had to use insecticides because of the serious insect problems, they lack adequate information on the type and quantity and the timing of applications.

Production Costs

As yields have gone down, the Brazilian cotton farmer's production costs per unit have gone up and his net return has shrunk. The guaranteed support price of 165 cruzeiros per arroba works out to about 8 cents per pound, based on an exchange rate of 61 cruzeiros to the dollar—the export rate at which the cotton is actually sold. Average yield in 1945-55 was 651 pounds of seed cotton per acre. Such a yield from 15 acres of cotton would bring the farmer about $800. But by the time he subtracts the cost of whatever fertilizer and insecticide he uses, the rent on his farm, and the interest and depreciation on his investment in equipment and animals, the family income has dwindled to about $400 for the cotton year. This income does not include any interest costs on production credit; and tenant families receive few fringe benefits such as access to roads, comfortable housing, or safe drinking water. Usually the tenant grows a vegetable garden, and perhaps he keeps a cow or two and a few pigs and chickens.

Price Support

The São Paulo farmer has felt that the price support on seed cotton is too low; the ginners have maintained that they cannot pay higher prices for seed cotton unless the prices they receive for lint are also raised; the textile manufacturers object to further increases in the price of lint. After some delay, the government raised the support price for seed cotton of the 1957-58 crop, but not that of lint. Whether the farmer can actually get the new minimum from ginners is a question.

The same price that the farmer feels is too low, the cotton exporter considers too high, because it is above the level of world prices. If the exporter has to sell at a loss on the world market—and he generally does— the government reimburses him by means of an exchange rate more favorable than those for some other export products. To obtain the local currency for this reimbursement, the government then auctions off 10 percent of the exchange received, to importers of luxury items, and another 30 percent to importers of so-called essential items, including food. This combination of cotton support price and relatively favorable exchange rate helps the Brazilian cotton farmers and exporters, but creates high-price problems for Brazilian importers.

Government Aid

As this procedure shows, the Brazilian Government has already given considerable support to cotton exports; it is reluctant to give more. Cotton may have to work its own way out of its

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Swedish farmer harvesting sugar beets in the first snow. Technical progress is rapid, but decline in number of farm workers holds back farm production.

Photos courtesy Skogs- and Lantbruksfilm

Swedish Farmers Have Unusual Role In Shaping Farm Policy

By KAREN J. FRIEDMANN
European Analysis Branch
Foreign Agricultural Service

SWEDEN'S FARMERS have an exceptionally direct part in formulating their country's farm policy. Through their organizations, they largely determine what the farm price and marketing programs are to be and have a hand in carrying them out.

These programs are one of the two important means that Sweden uses to effect its agricultural policy, the primary aim of which is to ensure an adequate income for farmers. The other means is farm rationalization—improved efficiency through modernization and enlargement of farms. The price and marketing programs rest on a system of floor and ceiling prices, supported by import fees and, in special cases, by quantitative restrictions.

In common with many other countries, Sweden faces the problem of preventing its price and marketing programs from producing unmanageable surpluses which must be exported at a loss. Though Sweden does have certain surpluses, the fact remains that the overall level of agricultural production has not increased since about 1950 despite rapid technological advances. A decline in the agricultural labor force of close to 4 percent per year has counterbalanced mechanization and other technical progress. Under existing circumstances, this must be considered a sign of a reasonably successful policy.

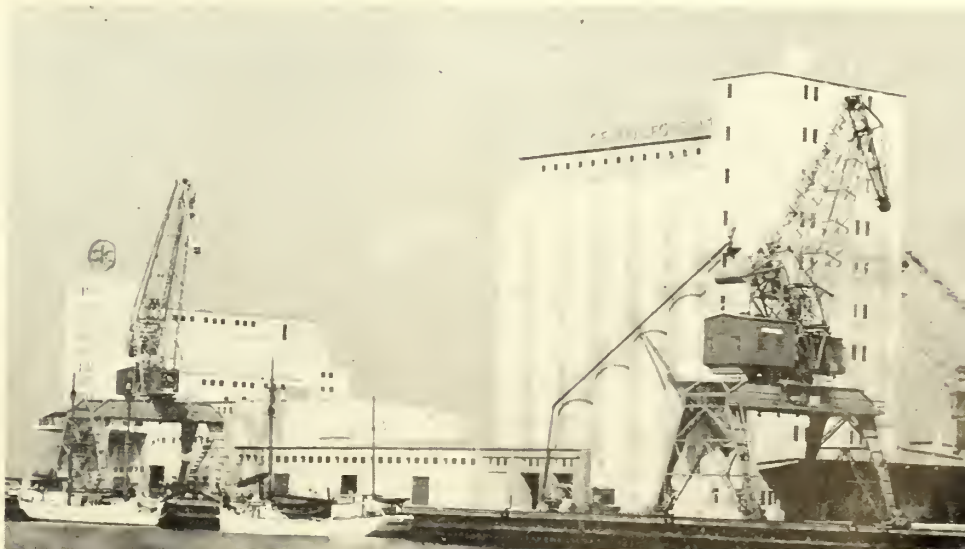
Furthermore, the number of small farms of 5 to 25 acres, difficult to mechanize, has declined by 15 percent since 1944, farms of less than 5 acres still more drastically, the proposed income goals have largely been achieved, and Swedish farm wages are the highest in Europe.

Many factors have contributed to these favorable developments, among them a busy Swedish industry able to absorb surplus farm labor. But the nature of farm policy must be credited with its share of the outcome.

Co-ops and Farmer's Union

Swedish farmers are highly organized and have a long tradition of doing things by cooperation. The two im-

Sweden's farm policies have been described in two articles in *Foreign Agriculture*: "Sweden Sets New Farm Price Policy," by Georg Frostenson, April 1956, and "Sweden's Agricultural Policy—Some Broad Aspects," by Karen J. Friedmann, December 1949.—Ed.



Grain silo owned by the great grain-marketing and purchasing association, which includes the Farm Federation as a member.

portant countrywide farm organizations through which farmers in recent decades have exerted their influence in economic matters are Sweden's Farm Federation (Sveriges Lantbruksforbund), a federation of farmers' cooperatives, and the Swedish Farmers' Union (Riksforbundet Landsbygdens Folk), which devotes its attention to the broad general interests of farmers.

Sweden's Farm Federation comprises 12 groups of cooperatives, 10 of them producers' cooperatives and 2 of them credit organizations. Though some of the local member organizations date back to the last century, the power of the cooperatives was greatly stimulated in the early 1930's, when they were chosen to carry out certain government marketing regulations brought forth by the depression. Practically every Swedish farmer is a member of one or more of these cooperatives. In 1956, cooperatives accounted for 99 percent of all milk marketed, 74 percent of the meat and eggs, and 66 percent of the bread grains. This is an indication of their predominance in Swedish agriculture, where these commodities account for close to 90 percent of all income from farming.

The Swedish Farmers' Union was established in 1929, and its membership includes well over half of all farmers. It may in some ways be likened to a trade union. It supports and collaborates with the Farm Federation. The two organizations negotiate jointly with the government on behalf of Swedish farmers and operate jointly the Institute of Agricultural Investigations, concerned with social and economic farm problems.

Agricultural Marketing Board [1]

It is characteristic of Swedish Government administration that a considerable part of the executive functions rests with boards, which are independent of the administration and the legislature, though receiving their directives from these. The administrative departments have correspondingly more limited functions.

These boards, under the chairmanship of a government representative, make investigations and propose legislation and are in close contact with trade organizations and other citizens' groups affected by their decisions.

The Agricultural Marketing Board is such an institution. Its forerunners in the early 1930's were created in response to a feeling that a government department could not have the specialized knowledge needed to propose and administer agricultural programs. It was deemed more desirable that boards, representing farmers, processors, dealers, and consumers, have the main responsibility for agricultural price and marketing measures, although approval of their decisions must be obtained from the administration and Parliament.

Farmers are represented on the present Agricultural Marketing Board by representatives from the Farm Federation and the Farmers' Union. The board is assisted in its work by a committee of experts which studies the agricultural situation and makes forecasts concerning coming developments. The two farm organizations are also represented on this committee.

Prices And Marketing

In 1948 the Farm Federation and the Farmers' Union furthermore set up a "negotiating delegation." They succeeded in getting a procedure established under which the annual prices of key farm products were actually determined in negotiations between this delegation and the Agricultural Marketing Board, based on studies and proposals by the board and its expert committee. If no agreement could be reached, the farm organizations could present their own proposals to the administration. Some compromise solution has always been found, though it has happened that the farmers have threatened to strike. Up to 1956, this annual price determination — which was based on the idea that total farm income and total farm costs for the whole farming industry must bear a certain constant relationship—was the cornerstone of the price policy structure. Therefore, the influence which the farm organizations exerted on these negotiations was of decisive importance in the building of price policy.

It has been and remains a basic tenet of Swedish postwar policies that the support of farm prices shall apply only to that part of the output which is marketed domestically. The possible losses on export surpluses must in principle be borne by the producers. Means for this are obtained partly through import fees on the products involved or related products, partly through fees charged the producers.

In the early 1950's the major farm cooperatives, which so predominantly handle the domestic marketing of farm produce, had a monopoly on foreign trade in their respective products. With the introduction of the price and import policies in 1956 this monopoly ceased. However, if the domestic prices fall below the floor level, quantitative import restrictions may be reintroduced and the monopolies made active again. Most of these are of course the same cooperatives which are represented on the Agricultural Marketing Board, on its committee of experts, and on the farm organizations' negotiating team.

Since 1956, farm prices have not been set annually. In that year, goal, floor, and ceiling prices for all important agricultural products were set for a 3-year period. The preceding negotiations concerning new principles to be applied as well as actual prices and import fees were conducted in the established manner between government and organizations. The experience gained during the current 3-year period will presumably determine future procedures, but there is no reason to expect a change in basic responsibilities of the groups involved.

The predominant role of farmers' organizations in setting and carrying out agricultural price and marketing policies has been criticized because it strengthens existing organizations and places considerable powers in the hands of their leadership. This may tend to perpetuate the production pattern which this leadership stands for. But there can hardly be any doubt that this system also has great advantages. The fact that the same organizations which make the demands for actions on prices and import controls have a large share of the responsibility for formulating the necessary policies and

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[1] An interesting elaboration of the history and role of the Agricultural Marketing Board may be found in "Samverkan Mellan Stat och Näringsliv i Jordbruksprisregleringen," by Olaf Söderström, in *Jordbruksekonomiska Meddelanden*, March 1957, Stockholm.

Photos by Harold L. Koeller

Left, Serbians gathering plums; **right,** hybrid corn on a state farm. Cold hurt some fruit, but food grains had record yields in 1957.

Yugoslavia's Bumper Crops Cut Its Food Import Needs

By HAROLD L. KOELLER
U.S. Agricultural Attaché, Belgrade

THE AGRICULTURAL SECTOR of the Yugoslav economy was as big a success in 1957 as it was a failure in 1956. Bumper crops, the largest since the war, exceeded 1938 records considerably. Production of almost all grains was well above 1938 levels, and output of the so-called industrial crops—sugar beets, sunflower seed, and tobacco—was far higher. This means that food imports in 1957-58, though still significant, can be smaller than last year's, and that tobacco exports the following year can be larger.

This record harvest, the first of the 1957-61 Five-Year-Plan period, has encouraged Yugoslavia's economic planners to feel that their farm goals might not be too unrealistic. The Plan calls for making Yugoslavia self-sufficient, or nearly so, in grains, edible fats and oils, and sugar. This is to be done by increasing unit yields for all crops and expanding acreage in oilseeds and sugar beets.

Yields and Production Up

Output of all *grains* was 12 percent above 1938 and over 7 percent larger than the small 1956 crop. Because record per acre yields of wheat and corn were harvested in 1957, total production of these two main crops was well above 1938, though acreages were smaller. Production of barley and oats likewise attained record levels. Unusually favorable weather and wider adoption of improved techniques were mainly responsible for the record yields.

Sugar beets and *tobacco,* which increased more than threefold compared with pre war, made most gain. Sunflower, the principal oilseed crop, also has been pushed since the war. Yugoslavia has sought to reduce sugar and oilseed imports and earn additional foreign exchange by expanding exports of oriental-type tobacco.

Production of *fruit* in 1957, while less than average, was up from 1956 and also larger than in 1938, a relatively poor fruit year. Fruits and nuts were adversely affected by freezing weather in early May of 1957, especially in Slovenia and the central mountainous area where most of the apples and plums are grown.

Larger Area Harvested

The harvested area of principal crops in 1957 was 9 percent—or about 1.2 million acres—larger than both the preceding year and the 10-year average. Most of the increase was in grains, although the area in vegetables,

PRODUCTION OF PRINCIPAL CROPS IN YUGOSLAVIA, 1938 AND 1955-57

	1938	1955	1956	1957
	1,000 metric tons	1,000 metric tons	1,000 metric tons	1,000 metric tons
Wheat	3,060	2,430	1,600	3,100
Rye	227	263	205	280
Barley	421	390	344	604
Oats	327	278	324	484
Corn	4,800	3,900	3,370	5,560
Total grains	8,835	7,261	5,843	10,028
Sugar beets	557	1,380	1,130	2,020
Sunflower seed	29	102	59	90
Tobacco	16	43	31	56
Hemp	355	342	220	312
Potatoes	1,870	2,270	2,190	3,220
Apples	119	249	140	105
Plums	303	904	180	592
Grapes	908	1,150	656	911

Source: Yugoslavia, *Statistical Yearbook*, 1957. 1957 figures are official estimates.

sugar beets, oilseeds, and tobacco also was expanded.

Dry, mild weather in the fall of 1956 and in February-April 1957 permitted farmers to plow and sow larger areas to small grains, sugar beets, sunflowers, potatoes, and tobacco. However, some of the increased area probably must be credited to the greater interest of farmers in growing crops. This interest sprang from several factors. On the economic side can be listed the generally favorable prices, plus the need of producing more crops in order to pay the rather high taxes calculated on theoretical income. On the political side are the discontinuance of many government controls and the government's action permitting the leasing of uncultivated plots of expropriated land to peasants. Farmers now have growing confidence that the government will not again attempt forcible collectivization of land.

OUTPUT AND GOALS FOR SOME MAJOR YUGOSLAV CROPS

	1951-55	1957	1961 goals
	1,000 m.t.	1,000 m.t.	1,000 m.t.
Wheat and rye	2,311	3,380	3,500
Corn	3,251	5,560	5,500
Sugar beets	1,318	2,020	2,650
Tobacco	29	56	59
Hemp	232	312	2,500
Potatoes	1,807	3,220	2,500

Progress Toward Goals

A comparison of production in 1957 with goals for 1961 indicates considerable progress. Some politicians were carried away by the results of the harvest and gave virtually all of the credit to government policies and resulting technical advances. True, part of the gain over 1951-55 may be attributed to improved techniques, but weather has played a key role.

These goals may not be as ambitious as they look, for the 1951-55 average includes 2 drought years of very low production. The increases are expected to come mainly from greater productivity as more fertilizer is used, land preparation is improved through greater mechanization, use of hybrid seed corn and other improved seeds becomes more widespread, pest control is improved, and the general competence of peasants increases through technical assistance. Total cropland area will not increase significantly, though there will be shifts among crops.

Import Needs

Crop production has fluctuated widely since 1949 owing to droughts in 1950, 1952, 1954, and 1956. In those crop years, quantities of grain were imported. Even in good years, wheat production has not been sufficient to meet consumption requirements. Since 1950, the United States has financed most Yugoslav imports of wheat, cotton, and fats through various aid programs. U.S. economic aid to date totals slightly over $700 million. In 1956-57 imports were about 55 million bushels of wheat (17 million of them from the Soviet Union), 170,000 bales of cotton (130,000 from the United States), 57 million pounds of U.S. lard, 60 million pounds of vegetable oil equivalent (36 million from the United States), and 21 million pounds of U.S. tallow.

Despite the bumper crops in 1957, import needs remain substantial. During 1957-58 Yugoslavia will have to import about 30 million bushels of wheat, 200,000 bales of cotton, 40 million pounds each of lard and vegetable oil, and 35 million pounds of tallow. In addition, it must import some hides and skins, about 40,000 tons of sugar, most of the citrus fruit it uses, and all of the tropical products.

The basic factors determining prospects for U.S. dollar exports to Yugoslavia are the shortage of dollar exchange and the continuing unfavorable balance of Yugoslavia's trade with the dollar area. Since 1950, U.S. aid programs have offset most of the shortage of dollars and enabled Yugoslavia to import substantial quantities of U.S. wheat, cotton, and fats and oils. But not until the Yugoslav Government feels that its balance-of-payments situation has improved would there seem to be much opportunity for selling large quantities of U.S. agricultural commodities for dollars.

Long-Term Marketing Prospects

Even assuming that Yugoslavia reaches all of its Five-Year-Plan farm goals, it will still need to import cotton, citrus fruit, tropical products, tallow, and some wheat every year. In poor crop years, it will need some edible oils and additional wheat. Lard imports will depend to a considerable extent on the size of the preceding corn crop and the number of hogs it could feed.

Yugoslavia grows only about 5 percent of its cotton requirements, and its cotton textile industry is expanding. So cotton imports are expected to rise over the long term, despite some increase in domestic cotton production and some substitution of domestically produced rayon staple fiber. The U.S. share of the market will depend mainly on whether financing is available and how much cotton Yugoslavia can buy for soft currencies.

Because the population increases by nearly 300,000 each year and the

(Continued on page 12)

Cattle Across the Border

By JOHN E. RAY
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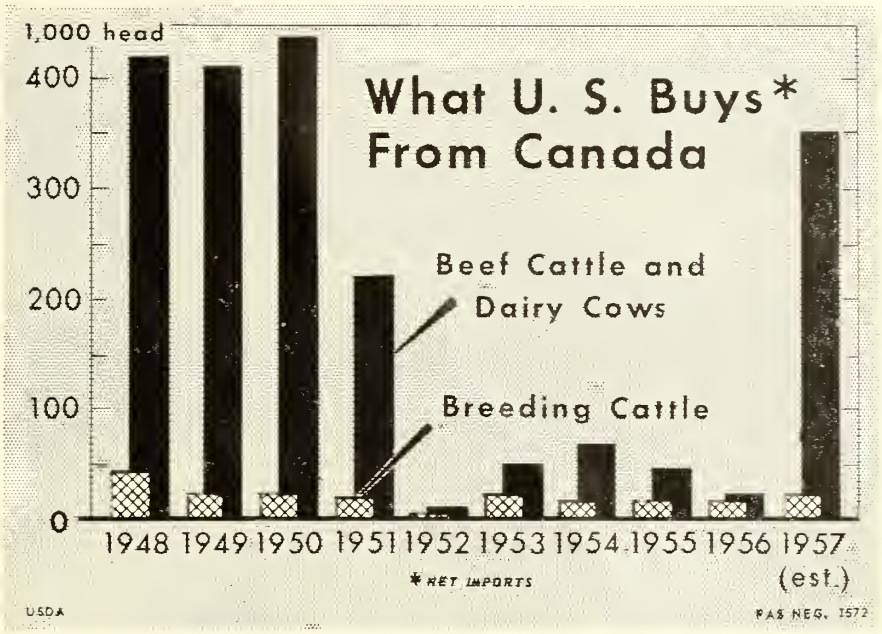


LAST YEAR, 1957, saw a resurgence of U.S.-Canadian trade in live cattle. Abundant feed supplies in the United States stimulated a strong demand for feeder cattle. Consequently, Canadian cattle—mostly underfinished stock for fattening on U.S. farms—began to move south across the border in numbers approaching those of 1948-51, when about 400,000 head were being imported into the United States each year. Imports of cattle for immediate slaughter also rose sharply.

Thus the United States received the feeder cattle it needed to convert surplus feed into meat, and Canadian prices of such cattle, which otherwise would have dropped in 1957 because of low domestic demand, obtained the support of U.S. cattle buyers.

Traditional Trade Partners

The United States and Canada have a long history of trade in cattle. Before World War II, the direction of trade was generally southward, from Canada into the United States. Each fall, thin feeder steers would move from the ranges of Alberta, Saskatchewan, Manitoba, and British Columbia into the United States, where they were fattened in feed lots during the winter. At that time the small Canadian feeder industry did not offer an attractive domestic market.

This era came to an abrupt end with the start of World War II. To conserve cattle for increased domestic consumption and for large exports to the United Kingdom, Canada placed strict controls on cattle exports. As a result, the cattle trade between Canada and the United States was not significant during the war period.

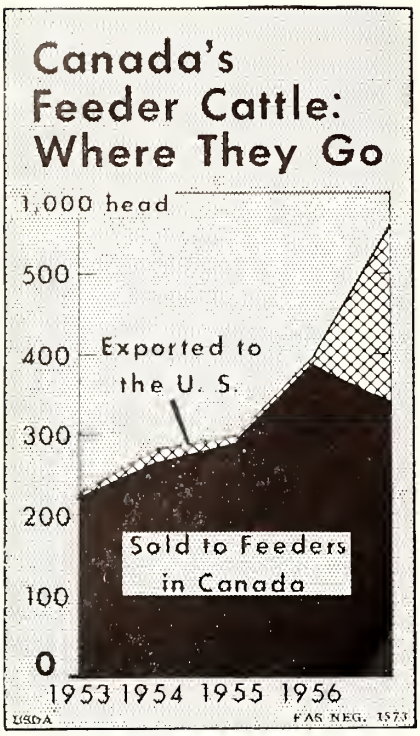
In August 1948, these controls were removed. The time was especially propitious for a resumption of cattle exports to the United States, where cattle numbers and beef production were relatively low. U.S. producers were just beginning the expansion that would continue until 1956. Not only was beef in relatively short supply, but farmers were holding back stock for building up their herds. They were offering fewer animals for slaughter. And with wartime controls relaxed, cattle prices rose to equate supply and demand.

In Canada, however, cattle numbers and beef production were on the downswing. The large wartime shipments of beef to the United Kingdom were tapering off. Producers were reducing the size of their herds. Cattle prices were relatively low. Cattle moved southward to the mutual benefit of Canadian breeders and U.S. feeders—some 400,000 a year, as mentioned earlier.

Changing Trade Picture

In the cattle trade, though, as in most things, change is the only certainty. The conditions which had favored U.S. imports of Canadian cattle shifted. Numbers and production rose sharply in the United States. With abundant supply, the demand for beef was filled. U.S. cattle prices leveled off and, after 1951, began to fall.

In Canada, cattle numbers reached a low point in 1951 and then began to rise. The Canadians, like U.S. farmers a few years earlier, held back cattle to build up their herds. Cattle prices mounted, and this was accelerated by the rapid growth in the Canadian population and in the country's economy. There were more Canadians to buy beef. And with more money in their pockets, they were buying more.



By 1951 Canadian exports, as a result of this prosperity, were dropping. The change in the trade pattern was accentuated by the closing of the U.S. border to Canadian cattle because of an outbreak of foot-and-mouth disease in Western Canada in February 1952. Although the disease was quickly eradicated in Canada, no imports into the United States were permitted until early 1953, when the 1-year quarantine requirement for this highly contagious disease was fulfilled.

By this time, however, the situation had altered completely. The impetus to trade beef cattle had vanished, and the majority of U.S. cattle imports from Canada were breeding cattle and dairy cows. During the period 1953-56, the beef cattle trade between Canada and the United States was insignificant. Sometimes it flowed north from the United States to Canada, sometimes south from Canada to the United States.

Canada's Feeder Industry

This period of relative stagnation for the crossborder cattle trade saw the development of an important cattle-fattening industry in Canada, centered in the province of Ontario. From 1951 to 1956, the number of feeder cattle sold to Canadian farmers for fattening rose from over 144,000 to nearly 388,000 per year. By offering a domestic market for thin, or unfinished, Western Canadian range cattle, this growing feeding industry helped reduce exports to the United States during this period.

Then in 1957, the picture changed once more. The United States had a record supply of feed grains on hand, but livestock numbers, on January 1, 1957, were down more than 1 million from a year earlier. Almost all of this reduction was in beef cattle. Dairy cattle stocks remained about the same.

Beef production was also slightly below the previous year. But the demand for beef remained strong. To meet this demand and to convert their abundant feed grain supplies into meat, U.S. farmers increased their orders for feeder cattle. Soon U.S. buyers were competing with Canadians on the Canadian livestock market for feeder cattle, which were in abundant supply in Canada. By July of last year, the number of cattle shipped from Canada to the United States had increased significantly. And during the last quarter of 1957, this southward flow of cattle—mostly thin stock for feeding—reached 1948-51 levels.

Yet the situation in 1957 differed from that of 1948. What caused this difference was Canada's expanded feeder industry. With increased shipments of feeders to the United States, the number of cattle put on feed in Canada dropped sharply from 1956 levels during the second half of 1957. This reduction is bound to reduce the number of fat cattle offered for sale in Canada during the last part of this year.

Outlook

Unless the demand for beef in Canada lessens—which does not seem likely—we can expect Canadian exports of all beef cattle to slacken during 1958. We may even find the United States exporting fat steers to Canada in the second half of the year.

Over the long term, however, the United States seems to be entering upon a period when fewer cattle will be available for slaughter. Consequently, we may see continued shipments of Canadian cattle, especially feeders, to the United States for a few years.

As in years past, these shipments will be small compared to the cattle and calf slaughter in the United States —40 million head in 1956—and the number of cattle on farms and ranches —95 million at the beginning of last year.

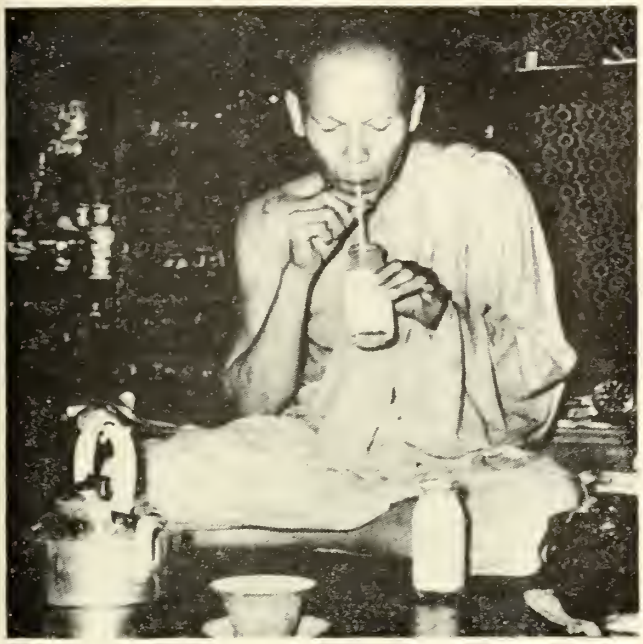
Imports from Canada in 1957 are estimated to have supplied less than 2 days' slaughter for the nation's packing plants. In fact, if all the cattle in Canada were exported to the United States, they would be completely consumed in less than 3 months. Nevertheless, since the 1958 outlook is for reduced U.S. beef production, the United States will benefit from any additional supplies of livestock made available by our neighbor nation.

Japanese School Lunch Program Encouraged

The Foreign Agricultural Service and the Oregon Wheat Grower's League are cooperating on a project designed to increase wheat and dairy products consumption through expanded school lunch programs in Japan. The project, utilizing P.L. 480 funds, is expected to introduce wheat and dairy products to an additional half million primary school children, particularly in the rural areas, and would mean an immediate need for 10,000 metric tons of wheat flour and 2,000 tons of nonfat dry milk. It would also provide a growing market for these products among Japanese people generally.

Three hundred 6-hour educational programs are being presented to community leaders from all prefectures in Japan to familiarize them with the plan and its effect on the health of the children. The same number of training courses are being held for personnel representing schools not currently participating in school lunch programs.

Furthermore, community leaders will be able to sample school lunch meals. A motion picture and a slide series will be prepared for educational and promotional purposes. Also, ovens and milk-mixing equipment will be installed in selected schools to improve the preparation of foods used in school lunch diets.



Charuwan Thartrakorn receives from Prime Minister Sarasin the millionth bottle of recombined milk distributed to Thai school children. Toddlers, **below,** grasp theirs with both hands, merchant, **left,** sips his through straw with second bottle in reserve.

Thailand Enjoys U.S. Recombined Milk

A year ago in December, recombined milk was introduced to the people of Thailand at the Constitution Trade Fair in Bangkok. The acquaintance ripened throughout 1957 as the U.S. Department of Agriculture and Dairy Society International carried out their joint Thailand Dairy Program, stressing the free distribution of 1.3 million samples of milk and ice cream.

As the sampling program ends its first year, there is evidence that a solid friendship has developed between recombined milk and Thailand's people. This method of bringing a new product together with potential new friends has had such success that there is every expectation of continuing the program.

The Thailand Dairy Program reached a dramatic climax in November, when a small pink-ribboned Thai girl accepted from Thailand's Prime Minister Pote Sarasin the millionth bottle of milk distributed to the school children of the nation. The recombined milk that Charuwan Thartrakorn immediately drank from her gold-painted bottle came from Foremost Dairies, Ltd., of Bangkok, a joint Thai-American corporation established last year. This firm now produces all the milk and ice cream purchased for the sampling program. Under a P.L. 480 program, the plant uses Thai currency to purchase high-quality nonfat dry milk from the United States.

The samples purchased from Foremost by Dairy Society International have opened up a great potential market all over the country. Program experts estimate that every pound of dry milk distributed through samples has created a commercial market for 3.4 pounds more.

Left, sisal, now a money-earner, is being exported in large quantities. **Above,** cutting sugarcane. Sugar is Republic's No. 1 export.

Export Crops Show Big Increase In Dominican Republic

By JAMES F. LANKFORD
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TWENTY YEARS AGO the Dominican Republic, which boasts of the first permanent white settlement in America, was exporting approximately $15 million worth of products annually, of which over 90 percent were farm commodities. Today the Republic's yearly earnings for products sold amount to over eight times that much, or approximately $125 million, with agriculture's share still about the same. During this period domestic production of sugar, bananas, and rice has more than doubled; that of tobacco has increased 45 percent, coffee 48 percent, and cacao 28 percent.

For a small country—the Republic is about as large as the combined area of Massachusetts, Vermont, and Rhode Island—this is an impressive record. Agriculture, however, is the mainstay of the Republic's economy and some 76 percent of the population works on farms. The ratio of cultivatable land is fairly high—11 percent—in relation to the average of only 3 percent for the Latin American countries. Furthermore, in recent years exports have usually exceeded imports, giving the country a favorable balance of trade, which totaled $16 million in 1956.

The Republic achieved this position through agricultural development. The major problem was—and still is—water. A third of the country's area is arid. In 1930 there were only 3 irrigation canals, today there are 54. And irrigated land has jumped from 7,000 acres to more than 250,000.

Land reclamation led to an equitable distribution of soil resources. Farmers with holdings of 1 or 2 acres were encouraged to try new seeds and given loans to buy farm machinery. With government help, they cleared adjacent land and irrigated it. As part of the resettlement policy, displaced persons from Europe and also Japanese have been encouraged to settle in newly irrigated areas. The new techniques they brought with them have done much to educate the native farmers.

The Dominican Government also encouraged farm colonization, with some success. At present there are approximately 50 farm colonies with a total population of about 60,000, of which around 13,000 are farmers. These colonies use modern machinery —most of it bought from the United States—and produce thousands of head of cattle, pigs, goats, sheep, mules, and horses, as well as poultry.

The country's principal crops, however, are sugar, coffee, cacao, tobacco, rice, peanuts, bananas, and corn. Other crops grown extensively are sweetpotatoes, coconuts, beans, oranges, potatoes, pineapples, plantains, and yuca.

Traditional Exports

Expansion has been concentrated on the export crops—sugar, coffee, cacao, and tobacco, which together with certain other less important agricultural commodities account for approximately 90 percent of the total value of Dominican exports. With irrigation, rice has been pushed. And, as part of the country's diversification program, sisal has now reached the export stage.

A third of Dominican land is arid, so many crops, such as tobacco, require irrigation. Shown **above,** one of the 50 new canals.

Sugar, which ranks first among the Republic's exports, has shown phenomenal growth during the past 2 decades. Despite large world supplies of sugar new areas are being planted to sugarcane and production is being upped. In 1956, the export value of sugar amounted to $53 million or approximately six times the prewar average. Great Britain was the biggest purchaser—58 percent—followed by Japan and the Netherlands. The United States took over 42,000 tons, a one-quarter increase over 1955.

Coffee ranks second among the export crops and is increasing in importance. In 1956, coffee exports were valued at nearly $33 million and represented about one-fourth of the total exports. In terms of value, coffee exports are more than 20 times prewar.

Much of the increase in coffee production has occurred during the past 7 years. For example, in 1950-51 production totaled only 400,000 bags but increased plantings have boosted production prospects for 1957-58 to an expected 712,000 bags. If realized, a crop of this size will be double the prewar production. While there are a few large coffee estates, the bulk of the Dominican coffee is grown on small farms of less than 5 acres. The United States buys most of the crop. Its purchases of $26.2 million in 1956 represented 80 percent of the Dominican coffee exports for that year.

The Republic ranks sixth among countries producing cacao and furnishes about 3 percent of the world supply and 10 percent of U.S. requirements. To the domestic economy, cacao is the third most important agricultural export. In 1956, cacao exports were valued at $14.3 million and represented 11 percent of all of the country's foreign earnings. The United States was the primary market, purchasing 99 percent of the exports.

While there has been substantial increase in the output of other export crops during the past 20 years, cacao production has increased only 28 percent. Various factors have retarded the growth of this industry, including disease. Considerable interest is still being shown by the government, and recent programs have included the construction of nurseries and free distribution of cacao plants to farmers.

Tobacco, the Republic's fourth leading agricultural export, has its ups and downs. In 1946, the crop hit a peak of 70 million pounds. In 1956, at 40 million pounds, the crop was still 45 percent higher than prewar. Exports in 1956 were valued at $5.1 million. The Republic produces a dark tobacco which is used mostly as a filler. It has traditional outlets in Europe and Africa, with the United States buying relatively little. Here too efforts are being made to boost production, through additional acreage, increased fertilizer, and other improved practices.

Other Crops

Rice is one of the country's new crops that has done amazingly well. Up to 1940, the Republic imported well over 70 million pounds of rice annually. Since then it has become a small net exporter, with the exception of a couple of years when there were short crops. Most of the government's development program has been directed toward rice; through land reclamation and irrigation the yearly harvest has been raised to around 225 million pounds.

As a result of this increased production, the country has now become self-sufficient in the production of rice and presumably is now in a position to export some—in fact, small quantities of seed rice have gone to foreign markets in recent years. Yet because of the high costs of production and rising domestic consumption, it is doubtful if sizable quantities will ever enter world trade.

The real newcomer among the Republic's exports is sisal. Almost overnight production jumped from 800,000 pounds in 1952 to 33 million pounds in 1957. At least half will be exported this year.

The outlook is good for continued heavy trading, although recent drops

in the prices of sugar and coffee have darkened the picture slightly. On the other hand, improved cacao prices have produced optimism among Dominican cacao growers. Also, the outlook for bananas, tobacco, meat, and certain other farm products is, on the whole, favorable.

Trade With U.S.

What does all this mean to the United States? Will the Republic's increased agricultural production and trade make it a competitor of the United States?

In the past, the trade relationship between the United States and the Dominican Republic has been mostly complementary. The United States is the most important single outlet for Dominican exports. In 1956, 10 percent of U.S. cacao requirements were met by Dominican exports. In addition, the Republic furnished 2 percent of our coffee needs plus various quantities of bananas, sugar, molasses, and certain other agricultural commodities.

In turn, the United States supplies around 65 percent of the total value of all imports into this Caribbean country. The bulk of the Republic's cotton and cotton products come from the United States. The country also buys U.S. meat and meat products, wheat flour and products, canned foods, preserved foods, and evaporated milk. In value, these purchases cannot compare with those of the larger Latin American countries, but, with the tourist business booming in the Caribbean, they may become larger.

Wheat should certainly benefit. In recent years, approximately 20 percent of our agricultural exports to the Dominican Republic has consisted of wheat and wheat products. Since the Dominican diet is low both in calories and wheat, any rise in living standards would naturally be translated into a bigger demand for wheat—and from all indications, Dominican standards are improving. Tourism has helped; also, both industrial and social progress has paralleled agricultural growth. So there may be a favorable market for such other U.S. farm commodities as live cattle, dairy products, fruits, vegetables, and certain canned foods.

Rice Imports Needed In Central America

Drought—which has reduced rice crops in the Far East—has also hit rice production in Central America. The 1957 crops of Panama, Costa Rica, and Nicaragua suffered the most. The affected countries are going to need substantially larger imports in 1958 to meet normal consumption demands. This will mean increased export opportunities for surplus producing countries, but what countries will be suppliers is not evident.

Despite expanded rice acreage, total Central American output for the 1957 crop year was 15 percent less than 1956 production. This means about 50 million pounds less rice this year, in terms of milled.

Panama would have to import 25 to 30 million pounds of milled rice to maintain its average per capita consumption level. In recent years Panama has been about self-sufficient in rice, but misfortune plagued that country all season. First, planting was delayed by the drought, then heavy rains fell during the late harvesting period. Also, recent invasions of crab grass and continuing loss of soil fertility have tended to further reduce yields.

Costa Rica's foreign purchases this year are expected to exceed the nearly 15 million pounds of milled rice bought abroad in 1957. The drought caused serious losses to its early crop, but the second—harvested in December—was about normal. Costa Rica's rice shortage is complicated by the fact that the rapidly growing population is eating rice much faster than the country can produce it, even in a good crop year.

Nicaragua will need a minimum of 11 million pounds—and probably more—of milled rice to meet home needs in 1958. Nicaragua planted more land to rice last year, but the crop—ravaged by drought—will be about 10 percent smaller than the previous season's. Another factor affecting Nicaragua's rice situation was the absence of carryover stocks in August before the new crop was harvested.

Where in this hemisphere will Central America seek additional supplies?

Ecuador—a heavy rice producer—has sold a lot of rice already this season and will not be able to export large quantities before June, when the new crop becomes available.

Colombia, Peru, and Venezuela, which have been exporters in the past, were also hit by the drought and will be looking for imports in 1958.

On the other hand, Mexico has been increasing production in recent years and is in a position to supply considerable quantities. The United States, despite its 1957 rice harvest being the smallest since 1950, also has stocks available to fill large orders.

Foreign PRODUCTION NEWS

Greece—with a record ***tobacco*** crop—may have to destroy as much as 10 percent of the 1957 harvest as nonmarketable tobacco. Output, which was 25 percent larger than 1956, was aided by an unusually wet growing season that stimulated leaf growth. The excessive rains, however, impaired the quality of the leaf.

Milk production in ***Yugoslavia*** for 1957 was up about 8 percent over 1956 for two reasons: (1) Higher production per cow effected through improved breeding of general-purpose cows by artificial insemination, and (2) a larger number of dairy cows, including several thousand head imported from Denmark and the Netherlands in recent years.

Production of ***wool*** in ***Spain*** was down sharply in 1957 as a result of the 1956 epidemic of "bluetongue" disease and subsequent skin diseases and nutritional deficiencies. Sheep losses were estimated at 120,000 head and both quantity and quality of wool were seriously affected. Production in 1958 will probably recover to some extent, but will still be below normal.

Foreign Competition *In Livestock and Meat*

THE U.S. LIVESTOCK INDUSTRY —geared to supply domestic red-meat demands—will meet its keenest foreign competition during 1958 in byproducts: Lard, tallow, greases, variety meats, hides, and skins.

Byproduct consumption in the United States has not kept pace with red-meat consumption, which has risen sharply since World War II. Surpluses have developed, and these have driven byproduct prices down. This has widened the gap between the consumer price for meat and the farmer's return for his livestock. A bigger foreign market is needed to narrow this gap.

U.S. exports go primarily to Western Europe—Western Germany is the largest market. The United Kingdom, the world's biggest buyer of meat byproducts, takes the bulk of its imports from Australia, New Zealand, and Argentina under long-term trade agreements.

U.S. products, for the most part, meet price and quality competition—both from other countries and from substitute products—without government assistance. But trade in these products is often limited by restrictions of foreign governments. Furthermore, foreign importers have complained of poor quality and lack of uniformity, and of noncompliance with consumer preference and import sanitation requirements.

Variety meats. U.S. exports of variety meats have risen phenomenally—from 3.5 million pounds in 1951 to nearly 100 million in 1956. The Netherlands and Western Germany are the principal markets. The Netherlands is also a major competitor. Its position in world commerce is much greater than its capacity to produce would suggest. Dutch merchants import commodities into the Dutch freeport and then re-export them to other countries.

Denmark is another important competitor—particularly in pork liver. U.S. frozen pork liver, the principal variety meat export to West Germany, suffers from being thawed for West German inspection and then refrozen. This limits its use to liverwurst manufacture, and means that it brings a much lower price than the Danish product, which is retailed fresh.

For all variety meats, competition in European markets in 1958 will continue to be stiff because Europe has had another year of record hog slaughter and U.S. output has also increased.

Lard. The United States produces almost a third of the world's lard. About 22 percent of domestic output is exported and constitutes about four-fifths of total world exports. The Netherlands, Denmark, France, and Belgium-Luxembourg are also significant exporters. Cuba and the United Kingdom take over half of U.S. exports.

The U.S. lard industry can expect competition from two directions in 1958—from expanded European lard production and from wider use of vegetable oil shortenings and margarine.

Tallow and grease. At least half the world's tallow and greases originate in the United States. Exports comprise nearly half of U.S. output and, again, four-fifths of world exports. Argentina, New Zealand, and Canada are the leading competitors. But increasing competition can be expected from another source—from detergents, which are making inroads in the European market at the expense of tallow-made soap.

Casings. The United States sells cattle and hog casings in numerous markets. The United Kingdom is the biggest buyer—mainly of hog casings. West Germany, the Netherlands, Switzerland, Spain, and Denmark take the most cattle casings. Foreign markets do not absorb all U.S. surpluses and large quantities of casing are utilized in animal feeds and high-priced garden-type fertilizers each year. Also, synthetic casings are encroaching on natural-casing consumption in both domestic and foreign markets. U.S. exports were down in 1957 and are expected to continue trending downward in present markets in the future.

Mohair. About two-thirds of U.S. mohair and specialty fiber production is exported—primarily to England. Turkey and the Union of South Africa are the other principal producers. Although demand fluctuates to some extent, there are no surplus problems involved and no reason to expect any significant change in the near future.

Hides and skins. Since 1952 the United States has been a net exporter of hides, marketing nearly a fourth of its total production abroad. Japan buys a quarter of U.S. exports. Canada, Mexico, and Western Europe are also important markets.

Argentina—the leading exporter of cattle hides and skins—has exceeded the United States by less than 10 percent during the last 2 years. Argentine hides compare favorably with the U.S. product in both quality and price.

India is a major indirect competitor, with an annual tanned hide production of about 25 million pieces. A fifth of these are exported—mostly to the United Kingdom.

U.S. exports of hides and skins were up in 1957, but are expected to level

U.S. EXPORTS OF LIVESTOCK BYPRODUCTS

	1953	1954	1955	1956	1957 [1]
	Mil. lb.	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*
Variety meats	29.0	45.9	69.5	99.4	95.0
Lard	423.0	465.0	562.0	611.4	515.0
Tallow and greases	1,241.0	1,205.0	1,337.0	1,540.6	1,460.0
Casings	14.6	11.8	19.1	18.2	16.5
Mohair [2]	.9	2.5	6.1	11.8	12.0
Hides and skins [3]	4.4	8.3	10.3	8.9	11.0

[1] Preliminary.
[2] Includes specialty wools.
[3] Million pieces. Principally cattle and calf. U.S. imports sheep and goat skins.

off this year. Synthetic competition is gaining in this area also—both domestically and abroad. About 50 percent of U.S. shoes now contain synthetic materials.

Dairy and beef breeding cattle. Market development programs and other market stimulating efforts are credited with expanding the number and value of beef and dairy breeding cattle exports. Mexico, with the aid of Export-Import Bank loans, has become an important market. In the first 10 months of 1957, U.S. exports to all markets totaled nearly 33,000 head compared with 6,232 head for the whole year in 1950. Foreign sales are expected to continue strong.

Trends

At present, increases in world population are just about pacing increases in world meat production. But a disproportionate part of the population increase is taking place in countries with very low per capita meat consumption levels. So, as meat production continues to expand, markets in countries that are now large per capita meat consumers will tend to become saturated. Meat-producing countries will be forced to develop potential markets in the lower per capita consuming countries, most of which are not now important in the meat trade.

Outlook

U.S. exports of byproducts in Europe have started to level off. Per capita consumption is increasing more slowly than in the past. Competition from substitutes is making inroads into byproduct consumption. European hog slaughter is expected to continue high, and competition for U.S. byproducts with European byproducts will remain strong.

These circumstances offer a challenge to the United States which must be met if expanding domestic surpluses are to be exported without disrupting world price structures and lowering returns to the U.S. industry.

This challenge can be met by (1) better merchandising, (2) seeking the removal of discriminating trade restrictions, and (3) stimulating market development in areas where there are inadequate meat supplies.

Uruguay's Wheat Harvest Rises as Cattle Decline

Traditionally a livestock-producing country, Uruguay has been shifting to grains—particularly wheat.

	Cattle [1]	Sheep [1]	Wheat [2]
	1,000 head	*1,000 head*	*1,000 acres*
1953	8,013	25,677	1,225
1954	7,819	26,578	1,850
1955	7,250	25,000	1,910
1956	7,305	22,914	1,982

[1] May 1 estimates. [2] Completed harvest.

Beef cattle production has declined steadily since 1951, mainly because of changing land use. Some pastureland, formerly grazed by cattle, is now used for sheep, other pastureland and is planted to grains. Meat production dropped from 888 million pounds in 1953 to 617 million in 1956, and both domestic consumption and exports reached an alltime low.

Uruguay's wheat production, on the other hand, nearly doubled—rising from 16.9 million bushels in 1953 to about 31.5 million in 1956. Government programs aimed at self-sufficiency in wheat production have encouraged increases in both acreage and yields. Current production provides about 15 million bushels for export annually.

	Meat exports	Wheat exports
	Mil. lb.	*1,000 bu.*
1953	236.5	6,339
1954	284.2	4,150
1955	59.2	18,214
1956	140.0	18,238

Record sheep and cattle numbers in the early 1950's contributed to overgrazed pastures. Drought conditions during late 1956 and continuing into 1957 caused a further pasture reduction and, consequently, reduced cattle numbers. The sheep population—although it has declined slightly—is still more than 30 percent above the prewar (1936-40) level. Wool is Uruguay's largest export product.

Faced with a serious decline in foreign exchange, Uruguay will probably continue to grow wheat for export until its cattle industry recovers. But recovery will be difficult under present conditions. Any large increase in cattle numbers would necessitate an intensive pasture improvement program since wheat area and sheep production will probably be maintained.

World Agricultural Summaries

Tobacco. World tobacco production dropped slightly in 1957 after many years of increase. Production in 1957 totaled 8,360 million pounds—244 million pounds less than 1956 and 126 million less than 1955 production. Primary reason for the drop was a decline of 497 million pounds in total U.S. output, resulting from a sharp decrease in acreage allotments. There were also decreases in Pakistan, Japan, Italy, the Federation of Rhodesia and Nyasaland, West Germany, and Hungary.

Coffee. Total world production of green coffee for the 1957-58 marketing year is forecast at 50.1 million bags, compared with 45.7 million estimated for 1956-57. Small increases are expected in Africa and Asia. The Dominican Republic expects to achieve a record production this season and Haiti also expects a significant increase. South American output too will be up substantially.

Potatoes. Potato production for 1957 was down 6 percent in the important producing countries. The North American crop was smaller than the very large 1956 crop, but above food needs. Some U.S. potatoes are being used for starch and livestock feed under a government program. The British crop is about on a level with 1955. Western European supplies are adequate for food and seed, but there will be a slight reduction in stocks for starch and feed.

Castor beans. Overall production of castor beans in 1957 was about 10 percent greater than 1956 output and 3 percent above the 1950-54 average. Brazil and India—which produce one-half to two-thirds of the world's castor beans—both reported larger crops and the United States and South Africa also showed increases.

Farming in the Atomic Age

(Continued from page 3)

by the coding branded on her rump (4) release the correct ration into the trough, (5) record the milk yield automatically, and (6) open the door of the milking stall to release the cow as soon as the milking job is finished. All that the future milkman-technician would have to do would be to put the electronic clusters on and take them off, to observe the health condition of the cows, to keep the electronic gadgets in order—and to draw a good monthly salary as a qualified electronic technician.

These predictions of things to come may not, of course, ever be realized. They may prove to be too expensive—or perhaps too complicated for the average farmer to operate. But even if they do not materialize, we may still be sure that other things, equally fantastic today, will be in common use in 25 to 30 years' time. Who would have dared to predict in 1930 that by 1955 we would be killing weeds with chemicals, destroying insects by poisoning the cell sap of plants? Or that we would produce new varieties of cereals and other crops by exposing the seeds to x-rays?

Down to Earth

To get down to earth, what do all these seemingly fantastic speculations mean to the farm people of today? What do they mean to governments and to trade? And what preparation can we make for the inevitable technological progress that seems to be coming to agriculture so much faster than we had deemed possible?

Obviously, there are areas where incidence of this vastly more costly and more efficient agriculture will be strongly felt. The first of these is the area of human relations. Today a major problem exists among farm families which cannot enlarge the size of their farms, or otherwise make the necessary adjustments required for maintaining a satisfactory standard of living. And this problem will grow rather than diminish as farming efficiency increases.

Our task then is in the field of agricultural education. We must provide our young farmers with the technical know-how so that they can use the improved equipment, and with management know-how so they can make the best of their resources. But we must also educate them to understand the individual human problems and the community problems that exist in periods of radical change.

The second area is marketing. There will be changes in the types and quantities of products, which will create an imbalance of supply and demand. We will run the risk of unexpected shortages as well as surpluses, as farmers shift from one crop to another. To cope with this problem, we may also run the risk of monopoly by government or overorganized private control.

Finance will also feel the changes. Banks and governments must face the matter of financing new types of agricultural units. They will need to consider credit policies and facilities that will provide the necessary capital. Yet they must avoid overcapitalization of production, individually, nationally, and internationally.

And lastly, foreign relations. In this area the task ahead is threefold. We must promote the exchange of technical and scientific knowledge as it relates to agricultural production and marketing. We must help to the best of our abilities those countries needful of foodstuffs and other aid. Yet we must not fail to maintain the flow of mutually advantageous trade among all friendly countries.

Swedish Farmers

(Continued from page 10)

making them work, no doubt exerts a moderating influence. It also appears to have kept farm price problems from becoming political issues to the extent that might otherwise have occurred, for the farmers' representatives in Parliament will normally be in favor of proposals to which the farm organizations have agreed. Basic to the success of such a system is of course a well-founded expectation that individuals will abide by the decisions of the organizations that represent them.

Yugoslavia's Bumper Crops

(Continued from page 12)

standard of living continues to improve, it may be expected that consumption of most foods and clothing will increase steadily. Per capita wheat consumption may decline as larger quantities of meat, dairy products, sugar, fruits, and vegetables become available, although the continuing shift from corn to wheat consumption will tend to offset this tendency for several years.

Prospects for U.S. exports during the next few years will depend on what can be done to offset the dollar shortage. Yugoslavia probably will need to import considerable quantities of American wheat, cotton, tallow, and hides, but will not be a regular market for vegetable oils and lard unless financing is arranged through Public Law 480 or some other means. As Yugoslavia's economic condition and balance-of-payments position improve, some opportunities for increased dollar marketings of a wider variety of U.S. agricultural products will develop.

Brazil's Cotton

(Continued from page 8)

difficulties. The government does offer some inducements to improving cotton production. By special payments, it encourages São Paulo planters to maintain cooperative fields and produce seed for planting; it also subsidizes them to plant 30 percent of their area with leguminous crops for use as green fertilizers.

Despite these government aids, cotton output in Brazil is not likely to rise so long as costs of production are inflated and world cotton prices are near the present low levels. These circumstances practically guarantee a continued low level of exports, for requirements of Brazilian mills are rising steadily. Currently, this trend in consumption is being slowed by inflation in Brazil. But in the long run, Brazil's cotton production may well amount to not much more than enough to supply this growing domestic need.

Irish Policy

(Continued from page 6)

projects designed to promote, for example, land reclamation, installation of running water in farmhouses, improvement of farm buildings, eradication of bovine tuberculosis, and upbreeding of livestock. An appropriation of $700,000 (dollar equivalent) to improve marketing methods was made in 1957.

The task of eradicating bovine tuberculosis has become particularly urgent because of the progress made in ridding British herds of the disease. Much of Great Britain is already closed to Irish cattle unless they are tested, and all of it will be within a few years. Thus the future of Ireland's major export depends on speeding up the attestation of Irish herds, at present not far advanced. Steps to this end were announced by the Irish Department of Agriculture in the fall of 1957. If the accelerated program proceeds according to plan, more than half the country should be actively engaged in eliminating tuberculosis from cattle by mid-1958.

Farm organizations are also working on the problem. They established a National Bovine Tuberculosis Eradication Committee, which has been drafting a comprehensive national project for submission to the Minister of Agriculture. This project was still unpublished in early December.

Free Trade Area

A major question under debate is Ireland's future in the proposed European free trade area, now being negotiated in Paris. As originally advanced by the United Kingdom, the proposal called for free trade among member countries in raw materials and industrial products, but not in food, feed, drink or tobacco. These farm products were excluded because the United Kingdom felt it must be free not only to protect domestic agriculture but also to continue its preferential treatment of imports from the Commonwealth, from which Ireland too benefits.

Ireland naturally wishes to keep its preferred position in the British market. Like other agricultural exporters, however, it is also interested in expanding its trade with other European countries. It therefore welcomed the decision taken in October 1957 by the Council of the Organization for European Economic Cooperation to tie agriculture to the free trade area plan in some as yet undetermined way.

Agricultural participation would involve not the system of free trade ultimately envisaged for industrial products but a system of controlled trade, according to a statement of Ireland's Vice Premier and Minister for Commerce and Industry, on his return from the October meetings. Agreement that agriculture should be included must be regarded as satisfactory, he said, in view of the importance to Ireland of agricultural exports. At the same time, he declared that "we have a special purpose in securing that nothing will emerge from the Paris talks which will affect adversely our trade with Britain. Arrangements have been made for prior consultation with the British Government on matters likely to arise during the Paris meetings which might affect our mutual trade relations."

Value of Exports to U. S. Farmer Shown by Record 1957 Shipments

Record U.S. agricultural exports in the year ending June 30, 1957, were a remarkable achievement: Over 35 million tons of commodities were moved. This volume was the equivalent of 3,600 shiploads, 800,000 freight carloads, or, in terms of land, the harvest obtained from over 60 million acres.

American farmers have a valuable stake in exports. Part of practically every crop is exported. But the export share is especially significant for such crops as cotton, rice, wheat, soybeans, and tobacco. This past year's figures speak for themselves:

Cotton: 7.6 million bales (500 pounds each)—equal to the production in Texas, Mississippi, and Arkansas, plus two-thirds of the crop in California.

Rice: 40 million bags (rough)—equivalent to the crops in Texas, Louisiana, and California, plus half the crop in Arkansas.

Wheat: 550 million bushels (including the grain equivalent of flour)—amounting to the combined outputs in Kansas, North Dakota, Montana, Oklahoma, Nebraska, and Washington, plus one-fifth of the Illinois crop.

Soybeans: 170 million bushels (including the bean equivalent of oil)—as much as the output in Illinois plus two-thirds of that in Minnesota.

Tobacco: 566 million pounds (farm sales weight)—equal to nearly three-fifths of the North Carolina crop.

Lard: 557 million pounds—involving the slaughter of 17 million hogs (one-fifth of the U.S. slaughter) and equivalent to four hogs for each of the Nation's farms.

Few areas abroad are able to produce enough cotton, wheat, tobacco, and other commodities to satisfy all their needs and preferences. The United States last year supplied 22 percent of the volume of agricultural commodities entering world trade. In specific commodities, it supplied three-fourths or more of the world's exports of lard, tallow, soybeans and oil, and cottonseed and oil. It furnished more than one-third of the world's exports of powdered milk, wheat, grapefruit, feed grains, cotton, tobacco, and flaxseed and linseed oil. And it shipped sizable shares of dry edible beans, condensed and evaporated milk, oranges, rice, and cheese.

MAJOR U. S. CROPS BENEFIT FROM EXPORTS

	Production exported [1] Percent	U.S. share of world trade [2] Percent
Cotton	57	49
Rice	85	15
Wheat [3]	55	44
Soybeans [4]	37	82
Tobacco	26	36
Lard	21	81
Citrus	10	28

[1] Exports in fiscal year 1957 compared with 1956 output.

[2] Calendar year 1956 except cotton and wheat, which are on a marketing year basis.

[3] Includes grain equivalent of flour.

[4] Includes bean equivalent of oil.

Panama Inaugurates New Tariff and Customs Code

A new Panamanian tariff and customs code went into effect on January 1, 1958. Panama is not a member of GATT (General Agreement on Tariffs and Trade), and does not have a reciprocal trade agreement with the United States.

The new code incorporates many changes in duty rates and classification of import commodities, including agricultural. It contains certain protective measures, adopted to aid national industries by increasing rates on imported products that compete with domestic items. For example, the duty on tomato juice is up from 2 cents to 36 cents per kilo, tomato soup from 16 to 47 cents, tomato sauce from 26 to 75 cents, and tomato paste from 36 to 85 cents per kilo. Rice has been increased from 8 to 20 cents per kilo and corn from 3.5 to 10 cents.

Luxury goods and products classed as nonessential are subject to high rates, but tourist items and commodities necessary for establishing and operating domestic industries are generally lower or, in some cases, duty free. Fertilizers have been placed on the free list to aid agricultural development. Breeding cattle may also enter duty free.

Wheat Featured in Triangular Transaction

Syria, Italy, and Egypt have entered into a triangular trade arrangement for wheat. Syria will supply Italy with 150,000 to 200,000 metric tons of Syrian durum this season and Italy, in turn, will ship between 210,000 and 300,000 tons of soft wheat to Egypt.

The Syrian wheat is to be of the 1957 crop. Exporters have been authorized to supply 120,000 tons and the remainder will be supplied direct by the Syrian Cereals Office.

Italy's 1957 wheat crop is estimated at about 8.4 million metric tons (6.7 million soft wheat and 1.7 million hard) compared with 8.7 million tons (7.2 million soft and 1.4 million hard) in 1956. The country, in recent years, has had a burdensome surplus of soft wheat and a shortage of hard wheat. Consideration is being given to shifting land from soft to hard wheat and using more land for livestock.

Norway Bans Danish Meat

Norway has prohibited meat imports from Denmark—a traditional Norweigan source of fatbacks—as a result of recent reports of foot-and-mouth disease in Denmark. The Norwegian sausage industry expected to import about 100 tons of Danish fatbacks during the current season—60 tons had entered the country prior to the embargo.

The ban could mean expanded export opportunities for other producing countries, such as the United States—a big fatback exporter with large supplies available for shipment abroad. As yet, however, U.S. fatback exports to Norway have not shown any significant increase.

Japanese Promoting Canned Orange Exports

Japan is promoting its No. 2 export product — canned mandarin oranges Its total export target for 1958 is about 3 million cases—10 percent more than last year's actual foreign sales. About two-thirds of the total will go to the United Kingdom under a trade agreement. Japan hopes to sell half the remainder to the United States. Exports at this level would mean an increase to the United States of 14 percent over last year. The tiny mandarin orange segments are popularly used in fruit salads and desserts.

Switzerland Bans French Feed Grains

Switzerland, to stop the spread of foot-and-mouth disease, has embargoed all feed grain imports from France. because grains harvested on farms where foot-and-mouth disease is present can carry the disease. This move will probably result in unexpected market opportunities in Switzerland for other feed grain exporters.

Switzerland imports over 250,000 tons of feed grains annually. The United States supplies nearly a sixth of the total. France has a large quantity of barley available for export and would probably have furnished nearly half of Switzerland's feed-grain needs during the 1957-58 season if the ban had not been imposed.

Venezuela-Canada Extend Trade Pact

Venezuela and Canada have extended their present trade agreement to October 11, 1958. The trade pattern between the two countries has remained fairly stable over the past few years. In 1956 Venezuela exported commodities valued at about $44.6 million to Canada and, in return, took imports totaling about $34.9 million.

Venezuela ships petroleum and petroleum products to Canada and imports both manufactured goods and foodstuffs. The principal food items purchased from Canada are wheat and wheat flour, preserved milk, oatmeal, eggs, and malted barley. The United States and Canada compete in the Venezuelan market for all of these.

Cuba Expanding Trade With Soviet Bloc

Cuba exported $39.7 million worth of raw sugar to Russia during the first half of 1957, continuing the sharp upward trend in Cuban exports to Soviet Bloc countries, which began in 1955. In that year Cuba's exports and re-exports to the Soviet Bloc totaled about $37 million, compared with only about $2 million in 1954. Shipments in 1956, while less than half the 1955 total, still reflected a significant increase over the 1954 figure. Most of the sales were of sugar, which went mainly to Russia, although Czecho-

slovakia took some quantities in both years and Hungary took some in 1956. Russia cannot be counted as a permanent sugar market, however, for the unexpected demand probably resulted from temporary shortages of beet sugar within the Soviet Bloc.

The value of Cuban purchases from Iron Curtain countries has not kept pace with sales. Imports during 1955 and 1956 were valued at about $1.3 million and $2.6 million, respectively. However, it is interesting to note that 1956 imports were double those in 1955, and three times the amount imported in 1954. About three-fourths of Cuba's purchases from the Soviet Bloc were from Czechoslovakia—mainly glass, crockery, textiles, and metal products.

Philippines Buys More U. S. Breeding Cattle

The Philippine Government has purchased 150 Santa Gertrudis bulls from 14 different U.S. herds. The first shipment was made in December 1957.

Santa Gertrudis cattle were first bought from the United States more than 3 years ago. They and subsequent shipments have done especially well in the Philippines, thereby prompting the latest purchase.

Sweden Cuts Prices On Canned Goods

Price cuts on canned goods in Sweden are expected to increase consumption and thus expand trade opportunities. Markups have been sharply reduced in both the wholesale and retail trade in Stockholm. Prices were driven down by competition from a Swedish company formed in 1954, which specializes in bulk delivery of nonperishable foods directly to homes. The company has lowered prices of canned goods and other foods by up to 30 percent. The price reduction for canned fruits and juices alone averages about 16 percent.

West Germany Spending More for Seeds

West Germany spent $4 million more for agricultural seed imports in 1956-57 than in 1955-56. The increase was attributed mainly to price rises—rather than expanded tonnages—particularly for red clover seed.

The United States supplied $2 million of West Germany's $16.4 million total imports during 1956-57. Compared with 1955-56, U.S. shipments were up 11 percent, but, at the same time, the U.S. share in Germany's total supply fell from 14 to 12 percent. The United States and Canada combined were in third place as foreign sources of grass and legume seeds (on a value basis). They were also major exporters of alsike clover, timothy, and redtop seed. In addition, the United States supplied nearly 75 percent of Germany's seed corn needs and was the main source of forestry seeds.

Germany has traditionally been a big seed importer, both for domestic use and re-exports. The densely populated country has found it more economical to buy seeds abroad than to produce large crops.

During 1956-57, West German wholesale prices for grass and legume seeds fluctuated widely. Reports, at the beginning of the season, indicated low production in domestic and some important foreign areas. As a result, prices rose to a long-term peak by September 1956. Production, however, proved to be much larger than early indications and prices dropped.

Foreign Agriculture regrets an error in its January article, "Venezuela: One of Our Best Dollar Customers." In the chart on page 4, wheat should read wheat flour.